

# Decadal Agromet Bulletin of Pakistan



## Highlights....

- ❖ Light rainfall reported in the agricultural plains of G.B & Kashmir and dry weather reported from Punjab, K.P, Sindh & Balochistan during the last decade.
- ❖ Highest amount of rainfall recorded as 0.1mm at Chilas during the last decade.
- ❖ Lowest minimum temperature recorded  $-6.6^{\circ}\text{C}$  at Skardu during the last decade.
- ❖ Mainly cold and dry weather is expected in most parts of the country however, partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected at K.P, G.B & Kashmir.
- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Wheat cultivation is in progress in most of the irrigated areas. Farmers of irrigated areas should irrigate the crop as per requirement due to dry weather prevailing in most of the irrigated agricultural plains of the country. Normally first irrigation is given 20-25 days after sowing.
- ❖ Wheat cultivation has been completed in most of the barani areas of the country. Farmers of barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.

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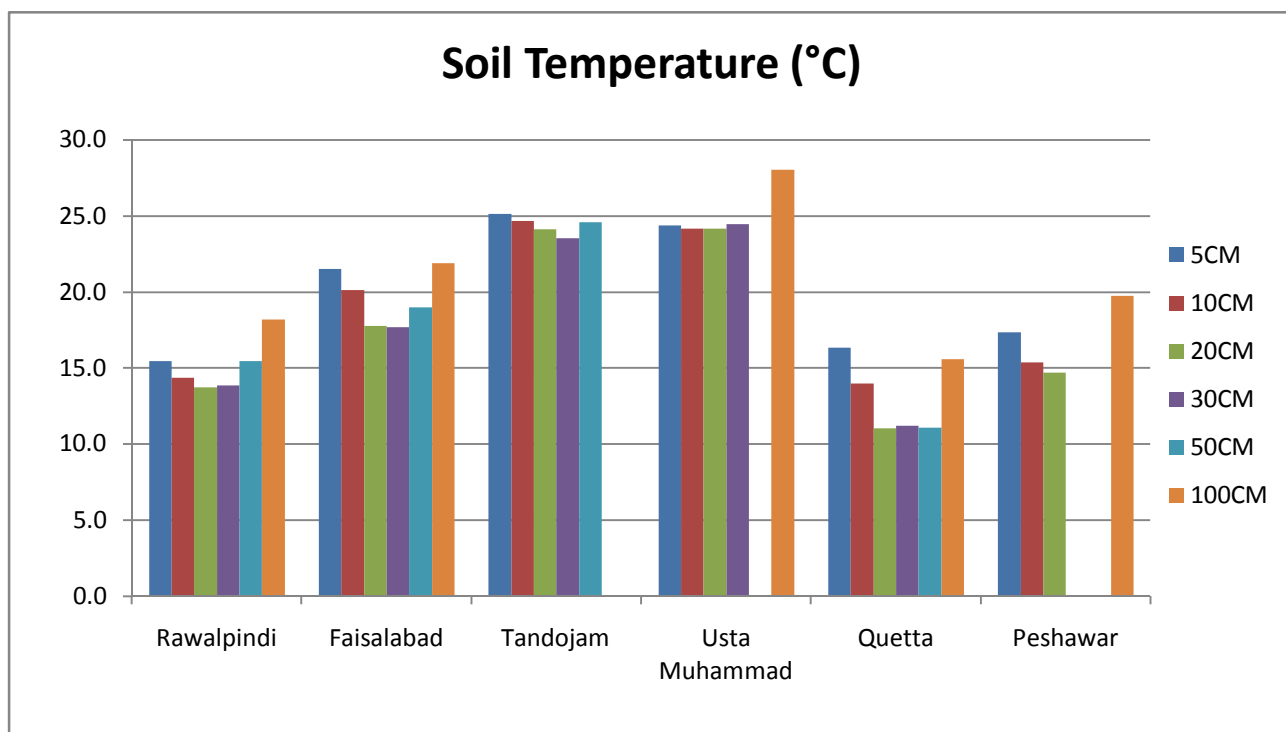
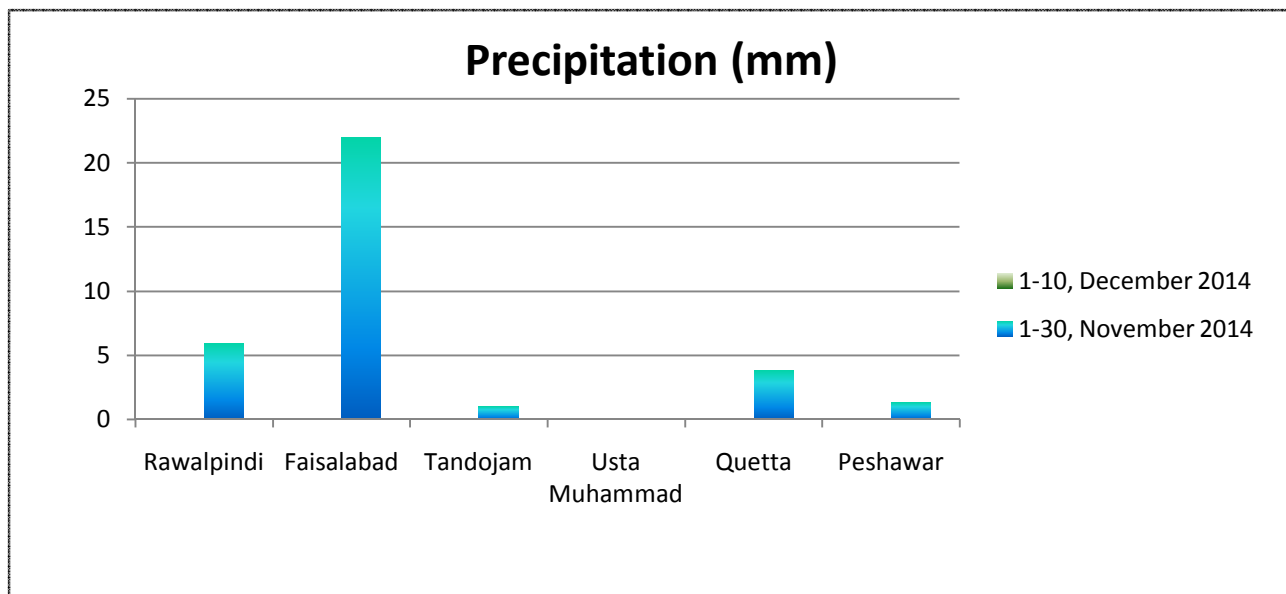
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Meteorological Conditions During 1<sup>st</sup> Decade of December, 2014

Sr. No.	Station	Precipitation (mm)			Air Temperature (°C)			Soil Temperatures (°C)						R.H (%)	Sunshine Duration (hours)	Wind Speed (km/hr)	ET <sub>o</sub> (mm/day)
		Normal	Actual	Dep	T <sub>max</sub> Dep	T <sub>min</sub> Dep	Mean	5cm	10cm	20cm	30cm	50cm	100cm				
1	RAWALPINDI	1.4	0.0	-1.4	2.2	1.8	15.3	15.5	14.4	13.8	13.9	15.5	18.2	50	88.4	4.8	2.1
2	FAISALABAD	0.5	0.0	-0.5	3.5	0.9	17.5	21.6	20.2	17.8	17.7	19.0	21.9	53	79.5	1.1	1.4
3	JHELUM	1.1	0.0	-1.1	2.7	-1.0	16.5	16.7	15.7	14.8	15.1	16.8	***	54	83.3	1.3	1.4
4	LAHORE	0.1	0.0	-0.1	2.3	-0.3	18.1	18.3	17.7	16.8	16.8	***	20.7	57	44.7	83.6	1.6
5	SARGODHA	0.9	0.0	-0.9	3.2	1.8	18.3	19.6	18.4	17.7	18.4	19.8	21.7	61	71.0	0.0	1.1
6	MULTAN	0.5	0.0	-0.5	1.6	3.2	18.3	***	***	***	***	***	***	58	76.1	1.6	1.6
7	KHANPUR	0.1	0.0	-0.1	2.9	0.9	18.4	***	19.7	20.2	20.8	22.0	19.1	57	77.4	2.0	2.0
8	TANDOJAM	0.3	0.0	-0.3	3.6	1.9	21.0	25.2	24.7	24.2	23.6	24.6	***	53	84.6	0.8	2.0
9	SAKRAND ☆	1.5	0.0	-1.5	4.0	-0.4	18.0	27.5	24.3	***	***	***	28.0	57	91.6	0.6	1.8
10	ROHRI	1.1	0.0	-1.1	2.9	1.6	20.8	27.3	25.4	23.5	24.8	24.5	28.8	49	92.3	0.6	1.8
11	DI KHAN	0.3	0.0	-0.3	3.4	0.1	16.7	***	***	***	***	***	***	46	87.0	0.0	3.2
12	PESHAWAR	0.9	0.0	-0.9	3.1	-0.4	15.6	17.4	15.4	14.7	***	***	19.8	51	68.3	0.9	1.0
13	USTA MUHAMMAD	1.2	0.0	-1.2	4.3	3.3	19.8	24.4	24.2	24.2	24.5	***	28.1	53	***	***	3.3
14	QUETTA	0.8	0.0	-0.8	0.4	2.1	8.3	16.4	14.0	11.1	11.2	11.1	15.6	33	94.1	4.6	2.1
15	SKARDU	0.6	0.0	-0.6	1.7	-0.4	3.7	***	***	***	***	***	***	49	40.6	0.3	0.7
16	GILGIT	0.3	0.0	-0.3	1.5	-0.3	7.7	***	***	***	***	***	***	56	37.3	1.9	1.2

Table-1: Meteorological parameters for selected station of Pakistan. “Dep” in the table stands for difference from climatic normal, i.e. actual value minus normal. And “% Dep” is calculated by the formula;  $\frac{\text{Dep}}{\text{Normal}} \times 100$ . T<sub>min</sub> & T<sub>max</sub> stands for minimum and maximum temperatures respectively. ET<sub>o</sub> stands for reference crop evapotranspiration. \*\*\* stands for no data and (☆) indicates the station with five years climatic (normal) data for computing departures.

## Graph at RAMC's during December, 2014



**Past Weather (1<sup>st</sup> to 10<sup>th</sup> December, 2014)**

Light rainfall reported in the agricultural plains of G.B & Kashmir and dry weather reported from Punjab, Sindh. K.P. & Balochistan during the last decade.

**1.1 Punjab**

Dry weather reported in the agricultural plains of Punjab. Decadal maximum & minimum temperatures both are raised above normal by 2.7°C & 1.0°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 56%, 74.3hrs, 2.0km/hr and 1.6mm/day respectively.

**1.2 Sindh**

Dry weather reported in the agricultural plains of Sindh. Decadal maximum & minimum temperature both are raised above normal by 3.5°C & 1.0°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 53%, 89.5hrs, 0.7km/hr and 1.9mm/day respectively.

**1.3 Khyber Pakhtunkhwa (KP)**

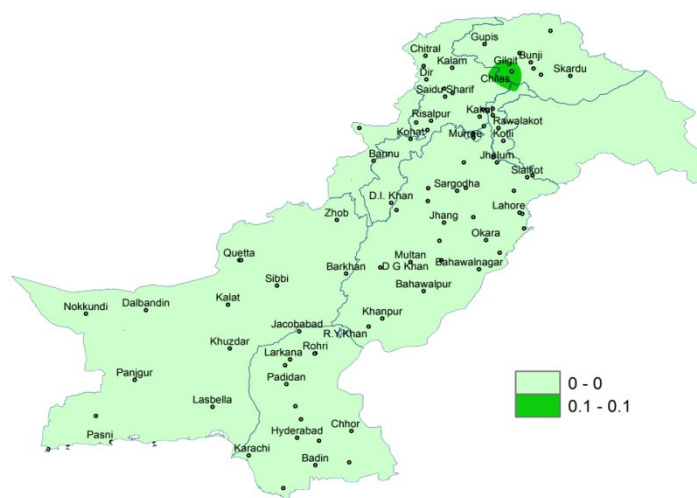
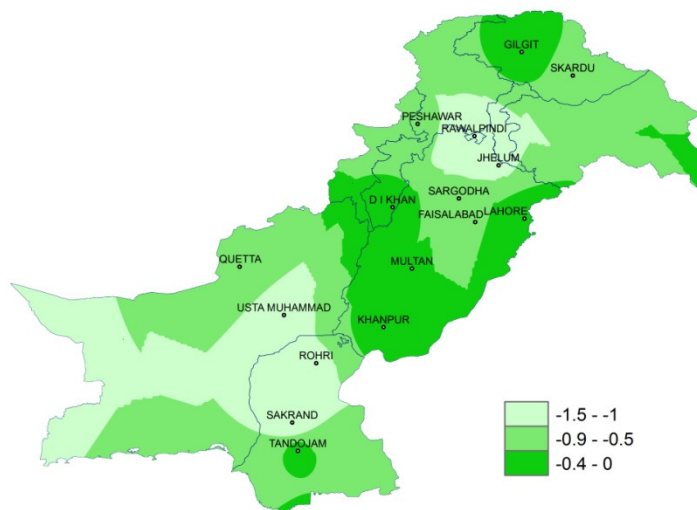
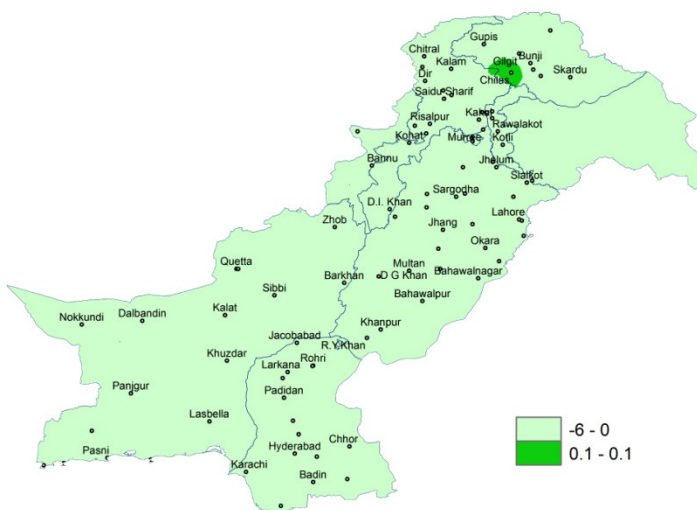
Dry weather reported in the agricultural plains of KP. Decadal maximum raised above normal by 3.3°C & minimum temperature dropped below normal by 0.1°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 49%, 77.7hrs, 0.5km/hr and 2.1mm/day respectively.

**1.4 Balochistan**

Dry weather reported in the agricultural plains of Balochistan. Decadal maximum & minimum temperature both raised above normal by 2.4°C & 2.7°C respectively, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 43%, 94.1hrs, 4.6km/hr and 2.7mm/day respectively.

**1.5 Gilgit-Baltistan and Azad Jammu & Kashmir**

Light rainfall reported in the agricultural plains of GB & Kashmir. Decadal maximum raised above normal by 1.6°C & minimum temperature dropped below normal by 0.4°C, in the province. Whereas mean values of relative humidity, sunshine hour, wind speed & ETo were recorded as 51%, 48.6hrs, 1.4km/hr and 1.0mm/day respectively.

**I. Actual rainfall****II. Departure of rainfall from Normal****III. Departure of rainfall from Previous Decade****Figure.1: Rainfall distribution during previous decade in "mm"**



## 2(a) Past Weather for Major Agricultural Plains (1<sup>st</sup> to 10<sup>th</sup> December, 2014)

### 2.1 RAMC, Rawalpindi (Potohar region)

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 50%. Mean day temperature was 23.9°C while night temperature recorded as 6.6°C with 88.4 hours bright sunshine duration. Wind speed recorded as 4.8 km/hr with mean wind direction *westerly*.

**Wheat (Chakwal 97):** Good condition, Third Leaf stage

### 2.2 RAMC, Faisalabad (Central Punjab)

Dry weather reported during the decade however weather remained cloudy for 01 day. Average relative humidity recorded as 53%. Mean day temperature was 27.1°C while night temperature recorded as 7.9°C with 79.5 hours bright sunshine duration. Wind speed recorded as 1.1 km/hr with mean wind direction *north westerly*.

**Wheat:** Excellent condition, Third Leaf stage

### 2.3 RAMC, Tandojam (Lower Sindh)

Dry weather reported during the decade however weather remained cloudy for 02 days. Average relative humidity recorded as 58%. Mean day temperature was 29.3°C while night temperature recorded as 12.7°C with 84.6 hours bright sunshine duration. Wind speed recorded as 0.8 km/hr with mean wind direction *northerly*.

**Wheat (TJ-83):** Good condition, Third Leaf stage

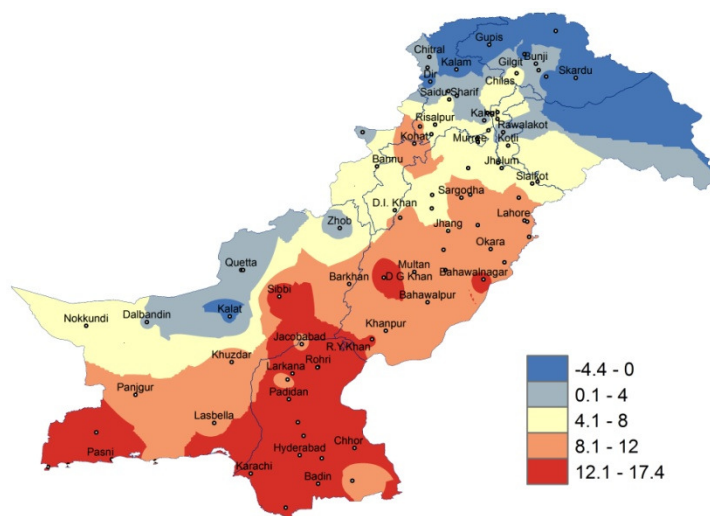
### 2.4 RAMC, Usta Muhammad (Eastern Balochistan)

Dry weather reported during the decade however weather remained cloudy for 01 day. Average relative humidity recorded as 54%. Mean day temperature was 28.2°C while night temperature recorded as 11.3°C.

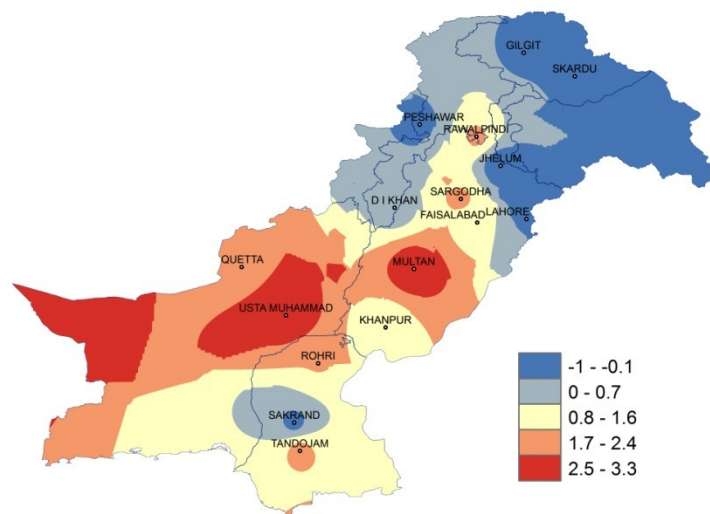
**Wheat (Zardana):** Good condition, Emergence stage

### 2.5 RAMC, Quetta (Northern Balochistan)

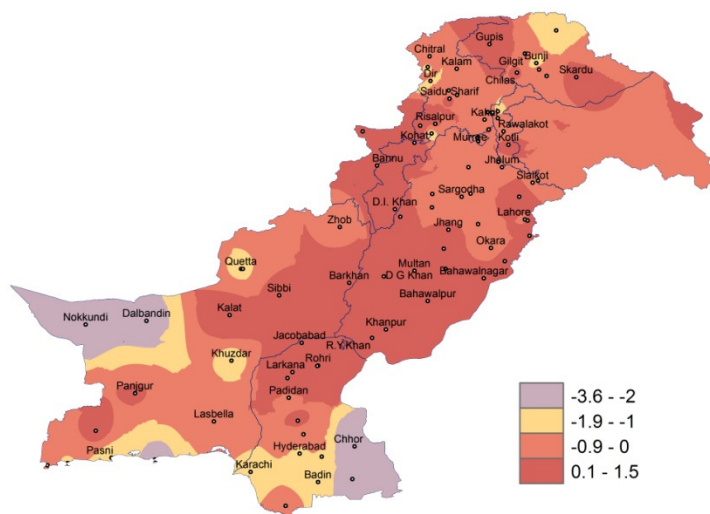
Dry weather reported during the decade however weather remained cloudy for 05 days. Average relative humidity recorded as 31%. Mean day temperature was 15.2°C while night temperature recorded as 1.3°C with 94.1 hours bright sunshine duration and wind speed recorded as 4.6 km/hr with mean wind direction *northerly*.



I. Actual min-temp



II. Departure of min-temp from Normal



III. Departure of min-temp from Previous Decade

Figure.2: Minimum Temperature distribution during previous decade in "°C"

## 2(b) Past Weather for Sub-Regional Agricultural Plains (1<sup>st</sup> to 10<sup>th</sup> December, 2014)

### 2.6 Jhelum

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 54%. Mean day temperature was 26.4°C while night temperature recorded as 6.5°C with 83.3hours bright sunshine duration. Wind speed recorded 1.3km/hr with wind direction *north westerly*.

### 2.7 Lahore

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 65%. Mean day temperature was 25.8°C while night temperature recorded as 10.3°C with 83.6hours bright sunshine duration. Wind speed recorded as 1.3 km/hr with mean wind direction *north westerly*.

### 2.8 Sargodha

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 64%. Mean day temperature was 26.8°C while night temperature recorded as 9.7°C with 71.0hours bright sunshine duration.

### 2.9 Multan

Dry weather reported during the decade however weather remained cloudy for 02days. Average relative humidity recorded as 58%. Mean day temperature was 25.9°C while night temperature recorded as 10.7°C with 76.1hours bright sunshine duration. Wind speed recorded 1.6km/hr with mean wind direction *north easterly*.

### 2.10 Khanpur

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 57%. Mean day temperature was 27.3°C while night temperature recorded as 9.4°C with 77.4hours bright sunshine duration. Wind speed recorded 2.0km/hr with mean wind direction *north easterly*.

### 2.11 Sakrand

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 57%. Mean day temperature was 27.4°C while night temperature recorded as 8.5°C with 91.6hours bright sunshine duration. Wind speed recorded 1.1km/hr with wind direction *northerly*.

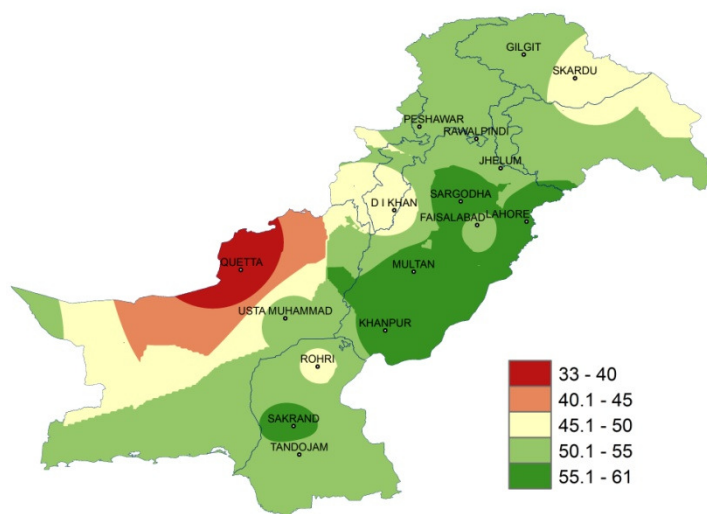


Figure.3: Relative Humidity in percentage (%)

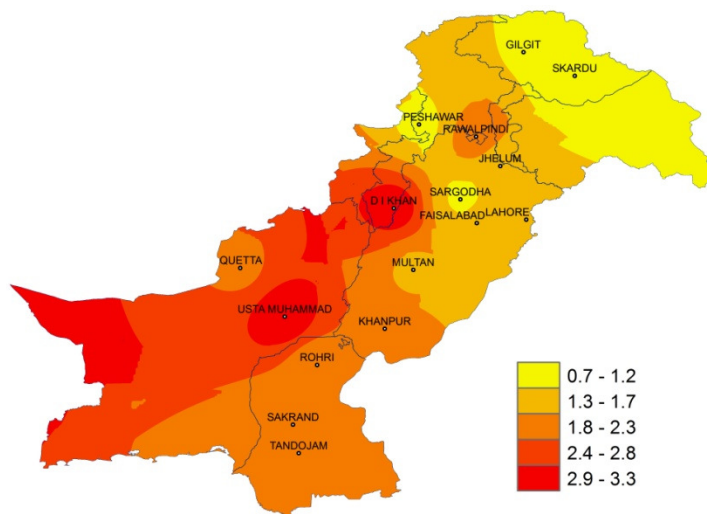


Figure.4: Reference Crop Evapotranspiration "ETo" in mm/day

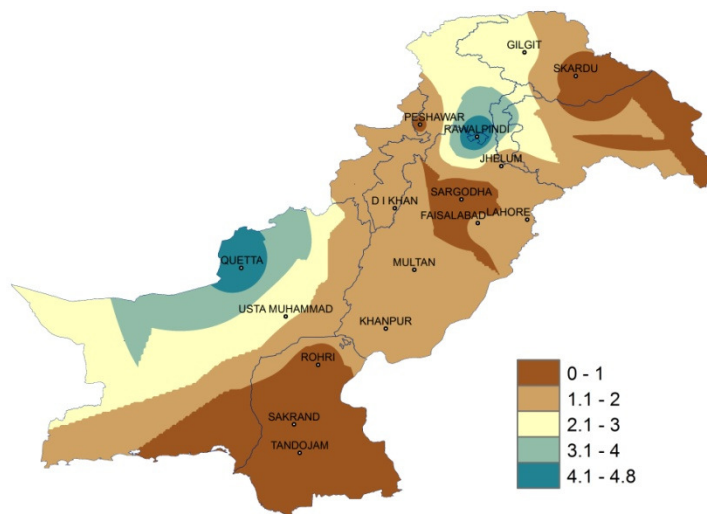


Figure 5: Wind Speed in kilometer per hour (km/h)

**2.12 Rohri**

Dry weather reported during the decade however weather remained cloudy for 01day. Average relative humidity recorded as 49%. Mean day temperature was 27.8°C while night temperature recorded as 13.7°C with 92.3hours bright sunshine duration. Wind speed recorded as 1.1km/hr with mean wind direction *north easterly*.

**2.13 D.I. Khan**

Dry weather reported during the decade however weather remained clear throughout the decade. Average relative humidity recorded as 46%. Mean day temperature was 26.6°C while night temperature recorded as 6.7°C with 87.0hours bright sunshine duration.

**2.14 Peshawar**

Dry weather reported during the decade however weather remained cloudy for 03days. Average relative humidity recorded as 51%. Mean day temperature was 24.7°C while night temperature recorded as 6.4°C with 68.3hours bright sunshine duration. Wind speed recorded as 0.9km/hr with mean wind direction *south westerly*.

**2.15 Skardu**

Dry weather reported during the decade however weather remained cloudy for 05days. Average relative humidity recorded as 48%. Mean day temperature was 10.7°C while night temperature recorded as -4.7.0°C with 52.5hours bright sunshine duration. Wind speed recorded as 0.6km/hr with mean wind direction *north westerly*.

**2.16 Gilgit**

Dry weather reported during the decade however weather remained cloudy for 09days. Average relative humidity recorded as 54%. Mean day temperature was 15.3°C while night temperature recorded as -1.6°C with 44.6hours bright sunshine duration. Wind speed recorded as 2.1km/hr with mean wind direction *easterly*.

### **3. Ten Days Weather Advisory for Farmers (11<sup>th</sup> to 20<sup>th</sup> December, 2014)**

**3.1 Temperature Forecast**

Day temperatures are expected to be normal but night temperature falls in most of the agricultural plains of the country during the decade.

**3.2 Wind Forecast**

Normal wind pattern may prevail in most of the agricultural plains of the country during the decade.

**3.3 Rain Forecast**

- ❖ **Punjab:** Mostly cold and dry weather is expected during the decade.
- ❖ **Khyber Pakhtunkhwa:** Mainly cold and dry weather is expected in the province. However light rainfall (with light snowfall over the hills) is expected over few parts mid of this decade.
- ❖ **Sindh:** Dry weather expected in most of the parts of Sindh during the decade.
- ❖ **Balochistan:** Mainly cold and dry weather is expected in the province.
- ❖ **Gilgit-Baltistan:** Mainly cold and cloudy weather is expected in most parts of the G.B however light to moderate rain (with light snowfall over the hills) is expected in 2<sup>nd</sup> half of decade.
- ❖ **Kashmir:** Mainly cold and dry weather is expected in most parts of the Kashmir however partly cloudy weather conditions with light to moderate rain (with light snowfall over the hills) is expected in end of 2<sup>nd</sup> half of decade.

**3.4 Advisory for Farmers**

- ❖ Farmers are advised to cultivate winter vegetables in time so that present soil moisture may fully be utilized.
- ❖ Wheat cultivation is in progress in most of the irrigated areas. Farmers of irrigated areas should irrigate the crop as per requirement due to dry weather prevailing in most of the irrigated agricultural plains of the country. Normally first irrigation is given 20-25 days after sowing.
- ❖ Wheat cultivation has been completed in most of the barani areas of the country. Farmers of barani areas are advised to remove weeds from the fields, so that the present soil moisture may fully be utilized.
- ❖ Farmers of cotton crop areas are advised to prepare their field for incoming rabi crops and complete sowing in time.
- ❖ Farmers of irrigated plains of Punjab, Sindh & K.P are advised to complete sowing of wheat crop before 15th December to get maximum yield. In case of late sowing, the recommended varieties should be cultivated to minimize the loss in yield.
- ❖ Removing weeds from the standing crops is very important as weeds utilize moisture and food which may be utilized by the crop. As a result considerable loss in yield occurs every year. However operations against weeds should be started using weedicides or manually when the crop completely covers the fields.